



January 25, 2001

The Honorable Steve Peace, Chair  
Joint Legislative Budget Committee  
State Capitol, Room 3060  
Sacramento, CA 95814

Dear Senator Peace:

Pursuant to the Supplemental Report of the 2000 Budget Act, Item 1760-001-0666, the Department of General Services is submitting the January 2001 Status Report on the California Integrated Information Network (CIIN).

If you have any questions or require additional information regarding the CIIN, please call Cynthia Larson-Schwartz, Assistant Deputy Director, Office of Network Services, Telecommunications Division, Department of General Services, at (916) 657-9189.

Very truly yours,

BARRY D. KEENE, Director  
Department of General Services

BDK:CLS:TR:eas:HonStevePeace.doc

Enclosure

cc: See attached Supplemental Report List #2  
Cynthia Larson-Schwartz, Assistant Deputy Director, Office of Network Services,  
Telecommunications Division, Department of General Services  
Eugene Pieracci, Chief, Office of Fiscal Services, Department of General Services

**SUPPLEMENTAL REPORT LIST #2**  
**LEGISLATIVE REPORT LISTING**

**ORIGINAL LETTER TO EACH OF THE FOLLOWING:**

The Honorable Steve Peace, Chair  
Joint Legislative Budget Committee  
State Capitol, Room 3060  
Sacramento, CA 95814  
(1 original + 17 copies)

Ms. Elizabeth G. Hill  
Legislative Analyst  
925 L Street, Suite 1000, B-29  
Sacramento, CA 95814  
(1 original)

The Honorable Steve Peace, Chair  
Senate Budget & Fiscal Review Committee  
State Capitol, Room 3060  
Sacramento, CA 95814  
(1 original)

Mr. Bion Gregory  
Legislative Counsel  
925 L Street, Suite 900, B-30  
Sacramento, CA 95814  
Attn: Ms. Diane Anderson  
(1 original)

The Honorable Tony Cardenas, Chair  
Assembly Budget Committee  
State Capitol, Room 6026  
Sacramento, CA 95814  
(1 original)

Mr. Gregory Palmer Schmidt  
Secretary of the Senate  
State Capitol, Room 400, E-22  
Sacramento, CA 95814  
(1 original)

Mr. E. Dotson Wilson  
Chief Clerk of the Assembly  
State Capitol, Room 3196, E-24  
Sacramento, CA 95814  
(1 original)

---

**COPY OF JLBC LETTER TO EACH OF THE FOLLOWING:**

The Honorable Tony Cardenas, Vice Chair  
Joint Legislative Budget Committee  
State Capitol, Room 6026  
Sacramento, CA 95814  
(1 copy)

Happy Chastain, Deputy Secretary-Legislation  
State and Consumer Services Agency  
915 Capitol Mall, Room 200, C-14  
Sacramento, CA 95814  
(1 copy)

The Honorable Jim Battin, Vice Chair  
Senate Appropriations Committee  
State Capitol, Room 3076  
Sacramento, CA 95814  
(1 copy)

S. Calvin Smith, Program Budget Manager  
Department of Finance  
915 L Street, A-15  
Sacramento, CA 95814  
(1 copy)

The Honorable Patricia Bates, Vice Chair  
Assembly Appropriations Committee  
State Capitol, Room 6031  
Sacramento, CA 95814  
(1 copy)

Karen L. Neuwald, Assistant Director-Legislation  
Department of General Services  
1325 J Street, Suite 1910, C-1  
Sacramento, CA 95814  
(1 copy)

The Honorable Dick Ackerman, Vice Chair  
Senate Budget & Fiscal Review Committee  
State Capitol, Room 4066  
Sacramento, CA 95814  
(1 copy)

Cec Wallin, Budget and Planning Officer  
Office of Fiscal Services  
1325 J Street, Suite 1600, C-18  
Sacramento, CA 95814  
(1 copy)

The Honorable George Runner, Vice Chair  
Assembly Budget Committee  
State Capitol, Room 6027  
Sacramento, CA 95814  
(1 copy)

California State Library  
Government Publications Section  
914 Capitol Mall, E-29  
Sacramento, CA 95814  
(2 copies)

Michael J. Gotch, Legislative Secretary  
Office of the Governor  
State Capitol, First Floor, E-15  
Sacramento, CA 95814  
(1 copy)

Office of Legislative Counsel  
Attention: Indexing Division  
925 L Street, Suite 1150, B-30  
Sacramento, CA 95814  
(1 copy)

Originating Office

**SUPPLEMENTAL REPORT--REVISED 01/25/01**

# **Report to the Legislature**

## **California Integrated Information Network (CIIN)**

**January 1, 2001**

**Barry D. Keene, Director  
Department of General Services**

**Cynthia Larson-Schwartz, Assistant Deputy Director,  
Office of Network Services, Telecommunications Division**

## TABLE OF CONTENTS

<b><u>I. AUTHORITY</u></b> .....	<b>1</b>
<u>ITEM 1760-001-0666</u> .....	1
<b><u>II. EXECUTIVE SUMMARY</u></b> .....	<b>2</b>
<u>A. PROVIDE THE STATUS OF THE CIIN IMPLEMENTATION</u> .....	2
<u>B. IDENTIFY ACTIVITIES AND ACTIONS TAKEN TO REMEDY PROBLEMS WITH THE IMPLEMENTATION OF THE CIIN FRAME-RELAY NETWORK</u> .....	2
<u>C. IDENTIFY MODIFICATIONS IN THE SERVICE LEVEL AGREEMENTS (SLAs) BETWEEN THE STATE AND THE CONTRACTOR</u> .....	3
<u>D. IDENTIFY STEPS TAKEN TO PREVENT REOCCURRENCE OF IDENTIFIED PROBLEM AREAS</u> .....	3
<b><u>III. DETAIL STATUS OF THE CIIN IMPLEMENTATION EFFORT</u></b> .....	<b>4</b>
<u>A. PROJECT MANAGEMENT STRUCTURE</u> .....	4
<u>Major Implementation Component Table</u> .....	5
<u>B. OUTSTANDING ISSUES</u> .....	6
<u>B1. State Calling Cards</u> .....	6
<u>B2. Integrated Billing System</u> .....	6
<u>B3. Conversion of Other LEC Services</u> .....	6
<u>B4. Contract Management and Oversight Tools</u> .....	7
<b><u>IV. ACTIVITIES TO REMEDY PROBLEMS WITH THE IMPLEMENTATION OF THE CIIN FRAME-RELAY NETWORK</u></b> .....	<b>8</b>
<u>A. ESTABLISHED CRITICAL FRAME RELAY BACK-UP</u> .....	8
<u>B. TEMPORARILY SUSPENDED MIGRATION ACTIVITIES FOR NETWORK STABILITY</u> .....	9
<u>C. ESTABLISHED REGULAR EXECUTIVE LEVEL MEETINGS WITH PACIFIC BELL PRESIDENT OF NETWORK SERVICES</u> .....	9
<b><u>V. MODIFICATIONS IN SLAS BETWEEN THE STATE AND THE CONTRACTOR</u></b> .....	<b>10</b>
<b><u>VI. STEPS TAKEN TO PREVENT FUTURE PROBLEMS</u></b> .....	<b>12</b>
<u>A. IMPLEMENTED ORGANIZATIONAL CHANGES</u> .....	12
<u>B. PROVIDE DGS/TD WITH GREATER VISIBILITY TO NETWORK PERFORMANCE</u> .....	12
<u>C. ESTABLISHED ENHANCED NOTIFICATION PROCESS</u> .....	13
<u>D. REPLACE THE EXISTING FRAME-RELAY NETWORK</u> .....	13
<u>E. EVALUATED SLAs</u> .....	15
<u>F. IMPROVED SLAs FOR DATA SERVICES</u> .....	15

## I. AUTHORITY

### ***Item 1760-001-0666***

***California Integrated Information Network (CIIN).*** *The Department of General Services (DGS) shall, by January 1, 2001, provide a status report to the chairs of the budget committees in each house and the Chair of the Joint Legislative Budget Committee detailing the status of the California Integrated Information Network (CIIN) implementation effort. The status report shall include, to the extent possible, a description of the activities that DGS and the vendor have continued to pursue to remedy problems encountered with the implementation of the CIIN frame-relay network, modification in the service level agreements between the state and the Contractor, and steps the state has taken to prevent future problems.*

## **II. EXECUTIVE SUMMARY**

The Department of General Services (DGS), Telecommunications Division (TD), is charged with the centralized management and oversight for statewide telecommunications services and contracts.

In October, 1997 a Solicitation for Proposal was issued to procure services and divest the state of its ownership of telecommunications equipment. On December 4, 1998, the DGS, on behalf of the State of California, entered into a contractual agreement (CNT-001) with the Pacific Bell and the MCI for statewide telecommunications services collectively known as the California Integrated Information Network (CIIN). During the past two years, the contractors have continued efforts to convert CALNET services to the new contract services. During this conversion period, the state has experienced severe outages with frame-relay services and identified other conversion deficiencies. This report is in response to Item 1760-001-0666 of the Supplemental Report of the 2000 Budget Act and will address the following specific issues:

### **A. PROVIDE THE STATUS OF THE CIIN IMPLEMENTATION**

The following contract milestones have been completed:

1. The contractor has paid off the state's debt of \$18.4 million.
2. The contractor removed all state equipment at the San Francisco State Building and the Los Angeles State Building. The sites are now ready for disposal as appropriate.
3. The long distance services have been converted to the MCI contracted services with the exception of calling cards.
4. The Pacific Bell local services have been converted to the contract.
5. All data services have been converted to the contract.

The following contract implementation milestones remain outstanding:

1. The conversion of local exchange services from other local exchange carriers (LECs), in non-Pacific Bell service areas.
2. The promised integrated billing system with a proposed target date of December 2001.
3. The conversion of the long distance calling card service to the contract is expected to be completed by January 1, 2001.

### **B. IDENTIFY ACTIVITIES AND ACTIONS TAKEN TO REMEDY PROBLEMS WITH THE IMPLEMENTATION OF THE CIIN FRAME-RELAY NETWORK**

During the implementation of frame-relay services, the state encountered severe service disruptions. Under the direction of the DGS, the contractor took the following actions:

1. The contractor installed separate back-up frame-relay facilities for all state critical locations to ensure these services remain functional while a more permanent solution is implemented.
2. The contractor has stabilized and upgraded the technology used in the existing frame relay-network.
3. The contractor has increased the number of trained staff assigned to support the frame-relay service and continues to add staff.
4. Escalation procedures have been changed to ensure the state's frame-relay problems are brought to the attention of contractor management and state management in a more timely manner.

**C. IDENTIFY MODIFICATIONS IN THE SERVICE LEVEL AGREEMENTS (SLAs) BETWEEN THE STATE AND THE CONTRACTOR**

The DGS, working with our customers and legal consultation, negotiated critical changes to the SLAs for data services within the CIIN contract. The highlights of those changes are:

1. A key change is the focus of resolving problems at the individual customer level rather than only at the systemwide level. Individual user outages are no longer masked by the overall performance of the service.
2. Performance level commitments have been adjusted to be competitive with comparable services available in the marketplace.
3. The evaluation interval for performance has been reduced from quarterly reviews to monthly reviews.

**D. IDENTIFY STEPS TAKEN TO PREVENT REOCCURRENCE OF IDENTIFIED PROBLEM AREAS**

The combination of the modifications to the data service SLAs along with the following long term activities taken to remedy the frame-relay problems will ensure these problems do not reoccur.

1. The contractor designed and is now testing a new frame-relay network using a totally different product. Once the integrity has been assured, conversion to the new network will be done carefully over the next 12 months. Escalation procedures have been changed to ensure the state's frame-relay problems are brought to the attention of contractor management and state management in a more timely manner.
2. The new SLA agreement includes a much swifter process for identification of individual problem areas and stronger remedies provided to the state for financial recovery and alternate services.

### **III. DETAIL STATUS OF THE CIIN IMPLEMENTATION EFFORT**

The contract was signed on December 4, 1998, between the State of California and the Pacific Bell/MCI. The scope of the agreement covered all state telecommunications services from voice to data. Included in the agreement were special provisions to relieve the state's financial debt for equipment purchased earlier as well as remove the equipment from state locations that were no longer occupied by the state such as the Los Angeles State Building and the San Francisco State Building.

The project management structure discussed above includes both voice and data services. While the focus of this report is on frame-relay services and other outstanding implementation issues, it is important to note that the contractor successfully converted voice services within the established schedule. This included an excess of 185,000 local service lines, 60,000 voice mail boxes, 44 million IntraLata (local usage) minutes, and 212 million long distance minutes. This service transition was accomplished without degradation of service to customers.

#### **A. PROJECT MANAGEMENT STRUCTURE**

As previously mentioned, the Implementation Plan for the conversion of existing CALNET services to the Pacific Bell/MCI services was very complex and diverse. To manage this complicated effort, the plan was structured into eight major components with defined tasks and specific timelines. To manage this project, executive sponsors and a primary project manager were identified, who had responsibility for ensuring timelines were met. Experienced project managers were assigned to sub-teams. The state assigned task managers to work with the contractor and oversee the implementation. Weekly status meetings with all contractor and state task managers were established. Formal state approval of changes to the implementation schedule or contract deliverables was required. Additional meetings were held between the state and contractor executives to resolve issues relative to the contract.



Major Implementation Component Table

<b>Component</b>	<b>Start Date</b>	<b>Completion Date</b>
<b>Network Infrastructure</b> Implement a statewide SONET ring backbone dedicated to the contract use.	12/4/98	3/28/99
<b>Long Distance Services</b> Convert all long distance services to the contracted MCI service. This includes calling cards, 800 and regular business long distance.	2/11/99	<b>3/1/01</b>
<b>Service Conversion (Pacific Bell Territory)</b> Convert all local Pacific Bell telephone service to the contract. This also included the conversion of the state owned CALDEX service to Pacific Bell's Centrex service.	2/19/99	7/25/99
<b>Service Conversion (Other LEC Territories)</b> Convert all local telephone service outside of the Pacific Bell territory to the contracted service. These services were to be resold by the contractor, and the conversion was primarily a change in the billing of the service from the original service provider to the contractor's billing system.	11/1/98	<b>12/30/02</b>
<b>State of California Interconnect Point (SCIP) Equipment Removal</b> Remove equipment in the San Francisco State Building in preparation of selling the building to City of San Francisco.	8/19/99	9/10/99
Remove equipment from the condemned Los Angeles State Building.	9/13/99	11/5/99
Removal of equipment at other state locations.	11/5/99	8/23/00
<b>Billing System and Reports</b> Implement a consolidated billing system that would provide the customer with a single bill for local service, data services, long distance services and any other contracted services.	6/28/99	<b>12/30/01</b>
<b>Network Operations</b> Implement the contractor organization and structure to provide service operations and respond to specific state problems with service.	11/16/98	2/11/00
<b>Contract Management and Oversight Tools</b> Provide the state with the tools necessary to provide contract performance oversight and management	9/1/99	<b>6/1/01</b>
<b>Fiscal Management</b> Relieve state debt responsibility of \$18.4 million	12/7/98	2/2/99

## **B. OUTSTANDING ISSUES**

### **B1. State Calling Cards**

One element of the CIIN contract was the replacement of the CALNET calling cards with those provided by the contractor, the MCI/Worldcom. The conversion schedule of the calling cards has been delayed due to legal issues about the language for the card carrier and inaccuracies encountered in the initial conversion effort. Initially, the MCI/Worldcom presented a card to the state whose layout and language contained terms and conditions that were not consistent with the terms and conditions of the contract. Approximately seven months of negotiations ensued before an agreement was reached to modify the card and adapt language into a contract amendment. Subsequent to the resolution of the card carrier issue, a conversion process and timeline were established. During the conversion process, procedural and processing problems were encountered that created additional delays. The identified problems were primarily instances of incorrect or missing information used on calling cards.

Because of the type and number of errors, the state has worked with the contractor to develop new processes and procedures for card conversion. The expected date for complete implementation of new calling cards is March 2001.

### **B2. Integrated Billing System**

The contractor has proposed an integrated billing system as part of the CIIN contract. The billing system, referred to as the State Integrated Billing System (SIBS) requires the integration of all contractor provided services, whether provided by the Pacific Bell, the MCI, other LECs or other subcontractors of the contract. This project involves integrated voice reports, fiscal management reports, changes to legacy billing systems, electronic media options, and account conversion. The contractor has not, as yet, delivered this contract element. The latest date presented for delivery is December 2001. The state is evaluating the potential for success and the impact on state operations if the dates are missed again. The requested date of December 2001 has not been accepted by the state pending assessment of impact.

### **B3. Conversion of Other LEC Services**

Included in the contract commitment was the conversion of state telecommunications services in LEC territories other than Pacific

Bell to the contract. This included services in the GTE territory, the Citizen Utilities, the Roseville Telephone Company, and about 15 other smaller companies throughout the state.

There are three primary reasons for the delays incurred in the conversion of services provided in other local exchange service areas:

1. Technical and process problems associated with the delivery of an integrated billing system;
2. The inability of the contractor to obtain firm commitments from the LECs to meet contractual requirements; and
3. The fact that the current legacy systems used by the Pacific Bell and the MCI cannot bill for services provided by other carriers.

#### B4. Contract Management and Oversight Tools

Included in the contract was the delivery of specific tools that allowed the state to manage the performance of the contractor in delivering contracted services. There are two main tools that are yet to be completely delivered. They are:

1. The California Automated and Evaluation Reporting System (CARES). The CARES is designed as a web-based electronic system which enables customers to submit and track trouble reports on voice and data services using a personal computer. It links only to existing Pacific Bell databases. Estimated completion is December 15, 2000.
2. Fiscal Management Reports. Complete Fiscal Management Reports are not available due to the non-availability of the SIBS.

#### **IV. ACTIVITIES TO REMEDY PROBLEMS WITH THE IMPLEMENTATION OF THE CIIN FRAME-RELAY NETWORK**

Early in the implementation effort the Pacific Bell started to experience problems with their frame-relay service. Major areas of the network would go out of service and it was taking the contractor an exceptionally long time to identify and correct the problems.

The DGS immediately intervened on behalf of our customer base. International Network Service (INS) was contracted by the DGS to assess the Pacific Bell/MCI frame-relay network. The state engaged the INS to conduct an Independent Verification & Validation (IV&V) of the frame-relay network primarily to determine if widespread frame-relay service disruptions experienced by state customers were systemic. The study examined architecture, operational processes/procedures, and resources applied to the Pacific Bell frame-relay network's operation. The report also included a review of the joint processes and procedures among the Pacific Bell, the MCI, and the MCI contracted third party Carrier Access Providers (CAP). Preliminary assessments of the Health and Human Services Data Center and the Teale Data Center were conducted to assess their overall ability to support the migration to the Pacific Bell/MCI provided frame-relay services. The essence of the study indicated inefficient processes and procedures to support network operation, inadequate numbers of staff with requisite technical expertise, and complex frame-relay technology.

As a result of the state's engagement of the INS and study findings, the Pacific Bell and the MCI implemented the following immediate actions to correct the problems.

##### **A. ESTABLISHED CRITICAL FRAME RELAY BACK-UP**

In December 21, 1999, the Pacific Bell committed to maintaining back-up frame-relay services at no additional cost to the state until March 30, 2000, or until the frame-relay network meets the contractual requirements of the CIIN contract.

The back-up frame-relay service was independently procured for 300 critical sites and would not be affected by the existing service problems. These services were established for critical customers such as the Department of Motor Vehicles, the Health and Human Service Data Center, the Teale Data Center, and the Legislative Data Centers. The services were provided at no cost to the state until installation and acceptance of the new frame relay network, now about nine months. This included installation, monthly service and additional equipment if required.

**B. TEMPORARILY SUSPENDED MIGRATION ACTIVITIES FOR NETWORK STABILITY**

In April, 1999, resulting from the instability of the Pacific Bell frame-relay network, the DGS, the major data centers, and the Department of Information Technology agreed to suspend all migration to the Pacific Bell frame-relay network under the CIIN contract until remedies were implemented.

**C. ESTABLISHED REGULAR EXECUTIVE LEVEL MEETINGS WITH PACIFIC BELL PRESIDENT OF NETWORK SERVICES**

During the period when the frame relay network was in a critical state, monthly meetings between the TD and the Pacific Bell President of Network Services were established. As the network became more stabilized the need for direct communications became less necessary. Temporary escalation processes and communications plans were established that ultimately directed the escalation to the President of Network Services. The TD Deputy Director, as well as the CIO of the Department of Information Technology, had direct access to the President of Network Services, based on an agreement between the SBC Chairman and Governor Gray Davis.

## **V. MODIFICATIONS IN SLAs BETWEEN THE STATE AND THE CONTRACTOR**

Two major provisions in the CIIN contract were the requirement of an Annual Service Review and the opportunity to Off-ramp services that did not meet performance standards without terminating the entire contract. These were new and innovative contract concepts. The purpose of the Annual Service Review was to maintain competitiveness throughout the term of the agreement. The contractor agrees to joint review of its pricing, service functionality, and marketing efforts on an annual basis to ensure the state and its customers will receive price competitive and technologically updated services. The contractor also agreed “that no other customer of the Pacific Bell or the MCI, collectively or as individual companies, will receive better rates for a substantially similar suite of services offered under substantially similar terms and conditions when the volume of business from the other customer is equal to or less than the volume or business the state delivers under this agreement.” The second concept, Off-ramping, was incorporated as an element of the SLAs and provides the state the option to remove a service type from the contract after completion of an evaluative process by the state and executive level discussions with the contractor.

The DGS initiated the first Annual Service Review after contracting with an outside consultant, the Gartner Group, to evaluate the frame relay service marketplace and make recommendations regarding competitive SLAs. Based on those recommendations, the state negotiated with the contractor to establish new SLAs for Data Services that meet or exceed industry standards. In addition, the state retained the service of MBV Law LLP, recognized telecommunications industry experts, to assist the state in negotiations. The highlights of the new SLAs are:

- The contract commitment to deliver services has changed from 90 percent of data services will be provided on time to now 95 percent of those services will be delivered as promised.
- The contract option for service Off-ramp at the network level was expanded to include provisions for circuit level remedies at the agency or customer level where service deficiencies exists.
- The period for monitoring performance was changed from quarterly to monthly, and changed the period from seeking remedies for poor service performance changed accordingly from quarterly to monthly.
- The schedule for Off-ramping service that continually does not perform to contract expectations was accelerated (monthly versus quarterly).

- Based on interviews with the DGS/TD customers, the new SLAs establish new quality of service performance measurements for frame relay such as transfer delay/throughput.
- The customer now has stronger financial remedies. Under the existing contract many of the outages would not have resulted in a rebate for the customer. Remedies are now based on monthly performance rather than the average over an entire quarter. Depending on the cause of the outage, frequency, and duration, the customer may be rebated from 15 percent to 50 percent of monthly per circuit recurring charges. For just one of the major outages the state experienced last year, the rebate would change from \$0 to \$245,000.

A key requirement of the Annual Service Review and SLAs was to establish network performance monitoring tools. These tools will be addressed in Phase II of the Annual Service Review. Phase II will commence upon formal approval of the Phase I SLAs.

The following table summarizes the results of Data Services Annual Service Review

	<b>Original Contract</b>	<b>New Amendment</b>
SLAs Meet or Exceed Industry Standards	No	Yes
Quarterly Remedies	Quarterly	Monthly
Monthly Remedies	No	Yes
Circuit Off-Ramp	No	Yes
Agency Off-Ramps	No	Yes
Service Off-Ramps	Yes	Yes at agency discretion
Performance Averaging (MTTR)	Yes	No
Circuit Level Performance	No	Yes
Agency Level Performance	No	Yes
Quality of Services Commitments	No	Yes
Provisioning Agreements	90 percent on time	95 percent on time
One Major Outage 1999	Quarterly (Sample outage\$0)	Monthly (Sample outage with new SLA -\$245,000)

## **VI. STEPS TAKEN TO PREVENT FUTURE PROBLEMS**

Many of the immediate actions taken to remedy the problems with the frame relay service will remain in affect for the life of the contract to ensure the problems will not occur in the future. In addition, the revised SLAs will add to the assurance that past problems will not occur. The specific changes that will ensure improved performance are listed below:

### **A. IMPLEMENTED ORGANIZATIONAL CHANGES**

The California Major Accounts Center (CMAC), is the organization under the Pacific Bell/SBC, responsible for maintenance provisioning and administration of services for the contract. They immediately expanded their organization by (50) trained personnel raising the total to over 170 staff. This increase provides additional personnel to track and resolve network issues. The contractor placed dedicated technical staff at each of the major data centers with the state to ensure timely coordination and resolution of any frame relay problems.

The CMAC initiated an effort to expand their organization from the over 170 employees to 300 contractor (Pacific Bell) employees by the end of year 2001.

In addition, the contractor initiated management/staff realignments by appointing a dedicated General Manager in the CMAC and assigning Service Managers to the Contract Program Manager in order to improve the provisioning process.

Support staff from the MCI are now located in the CMAC. The MCI provides the interlata, long distance facilities for the network. This physical arrangement will allow for the closer coordination of staff to isolate a problem to the specific trouble area and initiate rapid and focused corrective action. This will also allow for a coordinated verification of the corrective action, thus ensuring problems are resolved the first time.

### **B. PROVIDE DGS/TD WITH GREATER VISIBILITY TO NETWORK PERFORMANCE**

To effectively monitor network service performance, the DGS/TD has taken the initial steps in establishing a presence in the CMAC and assigning technical services staff to monitor network performance.

The Annual Service Review of the CIIN contract was constructed in two phases. The Phase I objective was to establish new SLAs. Phase II's objective is to identify and develop network management tools. Network management reports currently provided include:

1. Voice and Data Services – Mean Time to Repair (MTTR)



2. Quarter SLA Results
3. Centrex Management Transaction Report
4. Voice Provisioning
5. Voice Maintenance (trouble tickets and rebates)
6. Data Provisioning
7. Frame-Relay Maintenance (trouble tickets)
8. Private Line Maintenance (trouble tickets)
9. Network Performance Detailed by Central Office Location
10. ISDN PRI Maintenance (trouble tickets)
11. Digital Subscriber Line (DSL) Maintenance (trouble tickets and rebates)

Additional CIIN Contract Management Reports under development by Pacific Bell/MCI include:

1. Frame-relay Circuit Performance
2. Private Line Circuit Performance
3. Fiscal Reports
4. Public Sector Summary Administrative Fee Report
5. Fiscal Management Administrative Fee Report

In addition, the Pacific Bell states they are evaluating network management tools to assist the state in viewing contracted network performance. The state and the Pacific Bell/MCI are concluding Phase I of an Annual Service Review of the CIIN contract. Phase II will address network management tools.

#### **C. ESTABLISHED ENHANCED NOTIFICATION PROCESS**

The Pacific Bell has initiated an escalation process designed to improve notification to the state of service disruptions. The process utilizes voice mail with broadcast capability. The Pacific Bell broadcasts critical outages along with periodic updates and closures. Upon an urgent broadcast the voice mail system initiates a text- pager notification to the state, the DGS, the Teale, and the Health and Human Services Data Centers. The pagers are activated by the Pacific Bell's OSI Net Expert System. The voice and text paging was implemented to provide redundancy. The CMAC's responsibility is to work with technicians (including coordination with other service providers) and customers to coordinate the testing and repair of effected circuits. While this process has improved notification on critical outages, further refinement is necessary to ensure other minor outage categories are included in the process.

#### **D. REPLACE THE EXISTING FRAME-RELAY NETWORK**

Pacific Bell independently conducted a review of the frame-relay network and cooperated with the INS to support the IV&V study. Pacific Bell identified deficiencies in their network use of frame-relay to the ATM technology, and

ceased further installation and made a business decision to remove this technology from the network.

The contractor designed a new frame-relay network using the Cascade/Lucent technology (estimated at \$20 million) at no charge to the state. An IV&V study conducted by the Telecordia Technologies verified the network design and test plan. The Pacific Bell has developed a Frame-Relay Migration Project Communications Plan that recommends migration of all frame-relay services from the Newbridge Network to the Lucent Network; uses a selective and phased approach to customer migration; and commences installs, adds, moves and changes to the Lucent Network. Migration began on October 28, 2000, and is expected to complete in March, 2002.

### **New Network Architecture**

The new network will consist of 13 Lucent CBX 500 switches and 16 B-STDX 900 switches linked together with OC3 and DS3 backbone.

### **Customer Benefits**

Use of proven technology that includes node based versus network management system based architecture; switched virtual circuit (SVC) based architecture; non-disruptive trunk optimization; frequent software releases insure new features and capabilities.

The Lucent technology was selected because of proven performance and reliability. A Telecordia Technologies report dated November, 1999 states "the network design of the replacement network is consistent with the Pacific Bell engineering guidelines and provides sufficient interconnectivity and redundancy to support a robust and reliable service."

The Lucent technology provides state agencies the option to scale and grow their networks for the future.

The Lucent SVC based architecture provides a reroute capability 100 times faster per PVC than the existing network.

### **Migration Strategy**

Migration from the Newbridge platform to the Lucent platform will have a significant impact on the Pacific Bell and customers. The migration will take several months and will require commitment of all parties. Due to the uniqueness of each customer networks, the migration strategy may differ depending in network configurations. At high-level three

approaches to migrating circuits were provided. Key issues and considerations were included and vary depending on approach:

- Premise Equipment
- Facility Issues
- Design Issues
- Customer Resources

### **Project Management and Oversight**

Pacific Bell will assign a project manager who will lead a multi-discipline team consisting of operations, engineering, and marketing.

### **Schedules and Timelines**

Schedules and timelines will be developed for each customer after analysis and planning. Initial implementation began on October 28, 2000. Total network migration is expected in March, 2002.

## **E. EVALUATED SLAs**

Pacific Bell/MCI agreed to work with the state to evaluate and redefine competitive SLAs for data services.

## **F. IMPROVED SLAs FOR DATA SERVICES**

Modifications to the contracted SLAs have been developed that provide:

1. The focus of the new SLAs is on meeting individual customer data requirements. The contractor will meet performance commitments on individual customer circuits rather than just meet a level of service based on average performance over the entire customer base.
2. The individual customer is given direct control in deciding if their data circuits are to remain on the contract. Under the old SLAs there were no provisions to remove a single circuit. Either the entire service was removed from the contract for poor performance or no action could be taken. Under the new SLAs, if a customer's individual circuit fails to meet performance commitment, the customer has the latitude to remove the circuit from the contract without concern for the average performance of the entire service.
3. Customers will be able to respond more quickly to poor performance. Under the existing contract provisions, the entire data performance was monitored and evaluated on a quarterly basis and termination of the data service could occur only after four consecutive quarters of unacceptable performance for the entire service. The new SLAs provide for monthly reporting of individual circuit performance and requires the contractor to

take special corrective action after two consecutive months of service that failed to meet contract commitments.

4. The customer will see increased financial rebates for unacceptable service. Under the original SLAs, the service performance was reported on a quarterly basis and financial penalties were based on the average performance of the entire data service over the reported quarter. Customers received rebates only if their service failed to meet a performance commitment and the average for the entire service was below the SLA commitment. Under the new provisions, there is a financial penalty for each data circuit that fails to meet the monthly performance commitment without regard for the average service performance.